

Work Order ID 54881

January 5, 2010 8:03:27 AM



Page 1

Item ID: D117-762-041

Accept



Setup Start



Revision ID:

Stop



Item Name: Replacement Skidtube

Start Date: 05/01/2010 Start Qty: 1.00

Cust Item ID:

Required Date: 18/01/2010 Req'd Qty: 1.00

Customer:

Reference:

Run Start



Approvals: Process Plan: *RY*

Date: 10-05 Tooling:

Date:

Stop



QC:

Date:

SPC (Y/N):

Date:

| Sequence ID/ Work Center ID | Operation Description | Set Up/ Run Hours | Draw Number | Draw Rev. | Plan Code | Accept Qty | Reject Qty | Reject Number | Insp. Stamp |
|--------------------------------|--------------------------|----------------------|----------------|--------------|--------------|---------------|---------------|------------------|----------------|
|--------------------------------|--------------------------|----------------------|----------------|--------------|--------------|---------------|---------------|------------------|----------------|

Draw Nbr

Revision Nbr

D3582

Rev A

100

0.00



DOCUMENT CONTROL

DC

Memo

0.00

Document Control

Photocopy bluefile & type labels per PPP D117-762-041 CHG001

N/A

110

0.00



Skidtubes

Skidtubes

Memo

0.00

Skidtubes

1-Determine square end of tube and deburr
2-Drill #30 pilot holes using DT8678.
3-open holes to 5/16"

(X)

2

MB

10-01-06

120

0.00



BENDING MACHINE - SKIDTUBES

CNC Bend 1

Memo

0.00

CNC Delta 100 Bender

Bend tube as per program D3582 on CNC Bender and Dwg D3582. Use 5/16" locator pin on buggy "A".

(X)

2

MB

10-01-06

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | |
| | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
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NOTE: Date & initial all entries

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Approvals:

Process Plan:

Date:

Tooling:

Date:

Stop



QC:

Date:

SPC (Y/N):

Date:

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

130

0.00



Skidtubes

Skidtubes

0.00

Memo

1-Cut Fwd end of the tube using DT8185

2-Cut Aft end using DT8185

3-Deburr ends

4-Drill Aft Cap holes using DT8678 ***DO NOT OPEN AFT CAP HOLE***

5-Locate DT 8973 & Drill Ground wire hole on top of Tube.

6-Install 3/16 cleco in Ground wire hole, then drill all X-Boltholes using 3/16" drill.

7-Drill pilot holes for wearplates using DT8974

8-Open wearplate holes to Ø19/64" (0.297") as per Dwg D3582.

9- open ground wear holes to 0.391" as per section B-B

10-Open Aft Cap holes using .209" drill.

11-Drill pilot holes for section D-D and E-E. Holes must be laid out by hand. Mark out Center line and make sure that 6.65 and 5.906 measurements are respected. Double check before drilling, do not open holes to finish size.

10-1-06

10-1-7

10-1-8

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
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NOTE: Date & initial all entries

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Revision ID:

Stop



Item Name: Replacement Skidtube

Start Date: 05/01/2010 Start Qty: 1.00

Cust Item ID:

Required Date: 18/01/2010 Req'd Qty: 1.00

Customer:

Reference:

Run Start



Approvals:

Process Plan:

Date:

Tooling:

Date:

Stop



QC:

Date:

SPC (Y/N):

Date:

| Sequence ID/ Work Center ID | Operation Description | Set Up/ Run Hours | Draw Number | Draw Rev. | Plan Code | Accept Qty | Reject Qty | Reject Number | Insp. Stamp |
|--------------------------------|--------------------------------------------------------------------------------------------------------------------|----------------------|----------------|--------------------|--------------|---------------|---------------|------------------|----------------|
| 140 | | 0.00 | | | | | | | |
| | Skidtubes | | | | | | | | |
| Skidtubes | Memo | 0.00 | | | | | | | |
| Skidtubes | 1-Weld fwd cap D2964 per dwg D3582 and QSI 004 A/R AL ROD Batch: <u>M112860</u> 2-Grind flush <i>-ANW</i> | | | <i>8E 10/01/11</i> | | | | | |
| 150 | QC10- Inspt visual per QSI004- ground welds | 0.00 | | | | | | | |
| | | | | | | | | | |
| QC | Memo | 0.00 | | | | | | | |
| Quality Control | | | | <i>10-01-11</i> | | | | | |
| | | | | <i>2) 81060111</i> | | | | | |
| 160 | QC5- Inspt part completeness to step on W/O | 0.00 | | | | | | | |
| | | | | | | | | | |
| QC | Memo | 0.00 | | | | | | | |
| Quality Control | | | | <i>2) 81060111</i> | | | | | <i>(X)</i> |

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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NOTE: Date & initial all entries

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Item ID: D117-762-041

Accept



Setup Start



Revision ID:

Stop



Item Name: Replacement Skidtube

Start Date: 05/01/2010 Start Qty: 1.00

Cust Item ID:

Required Date: 18/01/2010 Req'd Qty: 1.00

Customer:

Reference:

Run Start



Approvals:

Process Plan:

Date:

Tooling:

Date:

Stop



QC:

Date:

SPC (Y/N):

Date:

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run HoursDraw
NumberDraw
Rev.Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

170

Chemical Conversion Coat per QS1005 4.1

0.00



HandFinish

Memo

0.00

Hand Finishing



WB 10-01-12

180

QC3- Inspect Part Finish

0.00



QC

Memo

0.00

Quality Control

1 10/11/12

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
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Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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NOTE: Date & initial all entries

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January 5, 2010 8:03:27 AM



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Item ID: D117-762-041

Accept



Setup Start



Revision ID:

Stop



Item Name: Remplacement Skidtube

Start Date: 05/01/2010 Start Qty: 1.00

Cust Item ID:

Required Date: 18/01/2010 Req'd Qty: 1.00

Customer:

Reference:

Run Start



Approvals:

Process Plan:

Date:

Tooling:

Date:

Stop



QC:

Date:

SPC (Y/N):

Date:

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

190

0.00



Skidtubes

Skidtubes

Memo

0.00

Skidtubes

1-Open X-Bolt holes to finish size as per Dwg D3582, all sections

2-Counter Sink X-BOLT holes as per Dwg D3582

3-Deburr and blow out chips from inside of tube, prep. tube for welding.

4-Bond web as per Dwg D3582 & QSI 015

A/R 241 Sike Flex Batch: M112345

Exp Date: 10/8/30

M 10/11/13

5-Weld x-bolt spacers(D2973) as per Dwg D3582 section B-B.

A/R AL ROD Batch: M112860

BE 10/6/14

6-Grind welds flush

AWM 10-1-14

M-k 10/02/16



200

QC10- Inspect visual per QSI004- ground welds

0.00



QC

Memo

0.00

=> 8/10/14



Quality Control

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Item ID: D117-762-041

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Setup Start



Revision ID:

Stop



Item Name: Replacement Skidtube

Start Date: 05/01/2010 Start Qty: 1.00

Cust Item ID:

Required Date: 18/01/2010 Req'd Qty: 1.00

Customer:

Reference:

Run Start



Approvals:

Process Plan:

Date:

Tooling:

Date:

Stop



QC:

Date:

SPC (Y/N):

Date:

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

210

QC5- Inspect part completeness to step on W/O

0.00



⇒ S 10/01/14



QC

Memo

0.00

Quality Control

215

Pressure Wash per QSI005 4.3

0.00



⇒ M 10-01-18



HandFinish

Memo

0.00

Hand Finishing

220

White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

0.00



1/11/13 17:00

0.00

⇒ M 10/01/18



Powdercoat

Memo

START TIME 10:30AM
OVEN TEMPERATURE: 320°F
FINISH TIME: 11:00AM

Powder Coating

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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NOTE: Date & initial all entries

Work Order ID 54881

January 5, 2010 8:03:27 AM



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Item ID: D117-762-041

Accept



Setup Start



Revision ID:

Stop



Item Name: Replacement Skidtube

Start Date: 05/01/2010 Start Qty: 1.00



Cust Item ID:

Required Date: 18/01/2010 Req'd Qty: 1.00



Customer:

Reference:

Run Start



Approvals:

Process Plan:

Date:

Tooling:

Date:

Stop



QC:

Date:

SPC (Y/N):

Date:

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

230

QC3- Inspect Part Finish

0.00

BR 10-01-20 ①



QC

Memo

0.00

Quality Control

240

HandFinishing

0.00



HandFinish

Memo

0.00

Hand Finishing

Install Wearplate & Ground Wire inserts as per Dwg D3582.

BR 10-01-20 ①

PTO

250

HandFinishing

0.00



HandFinish

Memo

0.00

Hand Finishing

1-Inspect for Foreign objects
2-Install Aft cap as per Dwg D3582, Detail "C"
A/R 241 Sika Flex Batch: M112345
Exp Date: 10/08
3-Install Wearplates as per Dwg D3582,
Note: Install Bolt and wa

BR 10-01-22 ①

11/20/12

Wing Walk as per dwg
Batch: M112900

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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NOTE: Date & initial all entries

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | |
| | | | | | | | |

Part No: D117-762-041 PAR #: 7 ^{See NCR 10-011} Fault Category: Procl. Skirt tubes NCR: Yes (No) DQA: / Date: 10-02-04
 Resolution: re-work Disposition: re-work QA: N/C Closed: / Date: /

| NCR: 54881 | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------------|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|--------------------------------|------------------------------------------|--------------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
| 10-02-04 | 250 | Upon assembly of the D3508-9 wear plate, it was noticed that the holes in the tube were too narrow and causing the wearplate to lift in the center when tightened. | <i>[Signature]</i> QS/042 | Drill jig feed hole angle slightly changed (came in) with use, due to mild O.D crushing on the tube from bending. DT8974 is Reworked. | See NCR 10-011 | <i>[Signature]</i> 10-02-04 | <i>[Signature]</i> QS/042 | <i>[Signature]</i> 10-02-04 |
| | | R.C. Tooling. | <i>[Signature]</i> 10-02-11 QS/042 | On the 2 most feed holes on the D3508-9 wearplate, slot the holes, square, to max 0.060" (or as necessary), to allow the bolts to tighten | <i>[Signature]</i> 10-2-11 | <i>[Signature]</i> 10/02/06 | <i>[Signature]</i> 10-02-04 QS/042 | <i>[Signature]</i> 10-02-04 |
| | | | <i>[Signature]</i> 10-02-11 QS/042 | With out any bending up of the wear plate * open/slot, square to 0.060" maximum towards center line. | <i>[Signature]</i> 10-2-11 | <i>[Signature]</i> 10/02/06 | <i>[Signature]</i> 10-02-04 QS/042 | <i>[Signature]</i> 10-02-04 |

NOTE: Date & initial all entries

Work Order ID 54881

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Start Date: 05/01/2010 Start Qty: 1.00

Cust Item ID:

Required Date: 18/01/2010 Req'd Qty: 1.00

Customer:

Reference:

Run Start

Approvals:

Process Plan:

Date:

Tooling:

Date:

Stop

QC:

Date:

SPC (Y/N):

Date:

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run HoursDraw
NumberDraw
Rev.Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

260

QC5- Inspect part completeness to step on W/O

0.00

QC

Memo

0.00

Quality Control

~~10/02/18~~
S10/02/16~~10/02/18~~
10/02/18

270

Packaging

0.00

Packaging

Memo

0.00

Packaging

Identify and pack for shipping as per PPP D117-762-041

Location:

PPP Rev:

PPP 54879

10/02/18

280

QC21- Final Inspection - Work Order Release

0.00

QC

Memo

0.00

Quality Control

10/02/18

ME
10-2-18

| W/O: | | WORK ORDER CHANGES | | | | | |
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NOTE: Date & initial all entries

Picklist Print

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Work Order ID: 54881



Parent Item: D117-762-041



Parent Item Name: Replacement Skidtube

Start Date: 05/01/2010

Required Date: 18/01/2010

Comments: IPP RevD: add pressure wash DD 09.12.11 verified by:EC

Start Qty: 1.00

Required Qty: 1.00

| Component Item ID/ Item Name | Replacement Item ID | Mfg/ Purch | Bin Item | Primary Location | Last Location | Route Seq ID | Unit of Measure | Qty on Hand | Remaining Qty To Pick | Qty Issued | Date Issued | Status |
|---------------------------------|------------------------|---------------|-------------|---------------------|------------------|-----------------|--------------------|----------------|--------------------------|---------------|----------------|--------|
| D2962-150 | | Manufactured | No | | | 110 | Each | 36.0000 | 1.0000 | | | |
| 3.540 Outer Tube, Extrud | | | | | | | | | | | | |

MB 10-01-00

Warehouse
Location

Loc Qty

Loc Code

Main Warehouse

ST

36

28672

36

140

Each

30.0000

1.0000

(K)

D2964

Manufactured

No



Cap

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

ST

30

14101

30

190

Each

37.0000

1.0000

1 BE 10/01/11

D2971

Manufactured

No



Cross Bolt Spacer

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

ST

37

44445

37

1 BE 10/01/11

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | |
| | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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NOTE: Date & initial all entries

Picklist Print

January 5, 2010 8:03:31 AM

Work Order ID: 54881



Parent Item: D117-762-041



Parent Item Name: Replacement Skidtube

Start Date: 05/01/2010

Required Date: 18/01/2010

Comments: IPP RevD: add pressure wash DD 09.12.11 verified by:EC

Start Qty: 1.00

Required Qty: 1.00

| Component Item ID/ Item Name | Replacement Item ID | Mfg/ Purch | Bin Item | Primary Location | Last Location | Route Seq ID | Unit of Measure | Qty on Hand | Remaining Qty To Pick | Qty Issued | Date Issued | Status |
|---------------------------------|------------------------|---------------|-------------|---------------------|------------------|-----------------|--------------------|----------------|--------------------------|---------------|----------------|--------|
| D3584-1 | | Manufactured | No | | | 190 | Each | 2.0000 | 1.0000 | | | |
| | | | | | | | | | | | | |

Web

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

LG

54349

2

2

190

Each

199.0000

2.0000



D2973

Manufactured

No



Cross Bolt Spacer

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

ST

14636

199

199

190

Each

34.0000

1.0000



D3662-3

Manufactured

No



Crossbolt Spacer

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

ST

44456

34

34

1 14 10/11/13

2 2E 10/01/14

1 2E 10/01/14

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | |
| | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

NOTE: Date & initial all entries

Picklist Print

January 5, 2010 8:03:32 AM

Work Order ID: 54881



Parent Item: D117-762-041



Parent Item Name: Replacement Skidtube

Start Date: 05/01/2010

Required Date: 18/01/2010

Comments: IPP RevD: add pressure wash DD 09.12.11 verified by:EC

Start Qty: 1.00

Required Qty: 1.00

| Component Item ID/ Item Name | Replacement Item ID | Mfg/ Purch | Bin Item | Primary Location | East Location | Route Seq ID | Unit of Measure | Qty on Hand | Remaining Qty To Pick | Qty Issued | Date Issued | Status |
|---------------------------------|------------------------|---------------|-------------|---------------------|------------------|-----------------|--------------------|----------------|--------------------------|---------------|----------------|--------|
| D3662-1 | | Manufactured | No | | | 190 | Each | 24.0000 | 3.0000 | | | |
| | | | | | | | | | | | | |

Crossbolt Spacer

Warehouse Loc Qty Loc Code

Location

Main Warehouse

ST 24

39022 6

39585 18

ALS4-1032-130 Purchased No

240 Each 2,717.000 36.0000



Insert

Warehouse Loc Qty Loc Code

Location

Main Warehouse

ST 2717

11051 ✓ 2717

ALS4-428-165 Purchased No

240 Each 40.0000 2.0000



Inserts

Warehouse Loc Qty Loc Code

Location

Main Warehouse

FP 40

6989 40

3 EC 10/01/10

36 BR 10-01-21.

2 BR 10-01-21.

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | |
| | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
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| | | | | | | | | |
| | | | | | | | | |

NOTE: Date & initial all entries

Picklist Print

January 5, 2010 8:03:32 AM

Work Order ID: 54881



Parent Item: D117-762-041



Parent Item Name: Replacement Skidtube



Start Date: 05/01/2010

Required Date: 18/01/2010

Comments: IPP RevD: add pressure wash DD 09.12.11 verified by:EC

Start Qty: 1.00

Required Qty: 1.00

| Component Item ID/ Item Name | Replacement Item ID | Mfg/ Purch | Bin Item | Primary Location | Loc Location | Route Seq ID | Unit of Measure | Qty on Hand | Remaining Qty To Pick | Qty Issued | Date Issued | Status |
|-----------------------------------------------------------------------------------------------------------------|------------------------|---------------|-------------|---------------------|-----------------|-----------------|--------------------|----------------|-----------------------------------------------------------------------------------------------|---------------|----------------|--------|
| D2965  Cap, 105 Skidtube | | Manufactured | No | | | 250 | Each | 55.0000 | 1.0000  | | | |

Warehouse
Location

Loc Qty

Loc Code

Main Warehouse

FP4

55

52057 ✓

55

250

Each

7.0000

1.0000


1 *10-01-26*

D3508-3

Manufactured

No



Wearplate

Warehouse
Location

Loc Qty

Loc Code

Main Warehouse

FP21

7

51386 ✓

7

250

Each

3.0000

1.0000


1 *10-01-26*

D3508-9

Manufactured

No



Wearplate

Warehouse
Location

Loc Qty

Loc Code

Main Warehouse

ST

3

46596 ✓

3

1 *10-01-26*

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | |
| | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
| | | | | | | | | |
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| | | | | | | | | |

NOTE: Date & initial all entries

Picklist Print

January 5, 2010 8:03:32 AM

Work Order ID: 54881



Parent Item: D117-762-041



Parent Item Name: Replacement Skidtube

Start Date: 05/01/2010

Required Date: 18/01/2010

Comments: IPP RevD: add pressure wash DD 09.12.11 verified by:EC

Start Qty: 1.00

Required Qty: 1.00

| Component Item Name | D/ | Replacement Item ID | Mfg/ Purch | Bin Item | Primary Location | Last Location | Route Seq ID | Unit of Measure | Qty on Hand | Remaining Qty To Pick | Qty Issued | Date Issued | Status |
|---------------------|----|---------------------|--------------|----------|------------------|---------------|--------------|-----------------|-------------|-----------------------|------------|-------------|--------|
| D3558-3 | | | Manufactured | No | | | 250 | Each | 12.0000 | 1.0000 | | | |
| | | | | | | | | | | | | | |
| Gasket | | | | | | | | | | | | | |

Warehouse
Location

Loc Qty

Loc Code

Main Warehouse

ST

12

51391 ✓

12

D3558-9 Manufactured No

250

Each

15.0000

1.0000



Gasket

1 BR 10-01-21.

Warehouse
Location

Loc Qty

Loc Code

Main Warehouse

ST

15

50928 ✓

15

D3558-11 Manufactured No

250

Each

13.0000

1.0000



Gasket

1 BR 10-01-21.

Warehouse
Location

Loc Qty

Loc Code

Main Warehouse

ST

13

40399

1

42254 ✓

12

January 5, 2010 8:03:32 AM

Shop Packet Print

1 BR 10-01-21.

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|--------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval. Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | |
| | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

NOTE: Date & initial all entries

Picklist Print

January 5, 2010 8:03:32 AM

Work Order ID: 54881



Parent Item: D117-762-041



Parent Item Name: Replacement Skidtube

Start Date: 05/01/2010

Required Date: 18/01/2010

Comments: IPP RevD: add pressure wash DD 09.12.11 verified by:EC

Start Qty: 1.00

Required Qty: 1.00

| Component Item Name | Replacement Item ID | Mfg/ Purch | Bin Item | Primary Location | Last Location | Route Seq ID | Unit of Measure | Qty on Hand | Remaining Qty To Pick | Qty Issued | Part Issued | Status |
|---------------------|---------------------|--------------|----------|------------------|---------------|--------------|-----------------|-------------|-----------------------|------------|-------------|--------|
| D3558-13 | | Manufactured | No | | | 250 | Each | 9.0000 | 1.0000 | | | |
| | | | | | | | | | | | | |

Gasket

Warehouse Loc Qty Loc Code

Location

Main Warehouse

ST

9

40400 ✓

4

42255

5

1 Bk 10-a-21

D3508-11

Manufactured No

250

Each

7.0000

1.0000



Wearplate

Warehouse Loc Qty Loc Code

Location

Main Warehouse

ST

7

40398

2

46880 ✓

5

1 Bk 10-a-21

D3508-13

Manufactured No

250

Each

5.0000

1.0000



Wearplate

Warehouse Loc Qty Loc Code

Location

Main Warehouse

ST

5

42252 ✓

5

1 Bk 10-01-21

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | |
| | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
| | | | | | | | | |
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| | | | | | | | | |

NOTE: Date & initial all entries

Picklist Print

January 5, 2010 8:03:32 AM

Work Order ID: 54881



Parent Item: D117-762-041



Parent Item Name: Replacement Skidtube

Start Date: 05/01/2010

Required Date: 18/01/2010

Comments: IPP RevD: add pressure wash DD 09.12.11 verified by:EC

Start Qty: 1.00

Required Qty: 1.00

| Component Item ID Item Name | Replacement Item ID | Mfg/ Purch | Bin Item | Primary Location | Last Location | Route Seq ID | Unit of Measure | Qty on Hand | Remaining Qty To Pick | Qty Issued | Date Issued | Status |
|--------------------------------|------------------------|---------------|-------------|---------------------|------------------|-----------------|--------------------|----------------|--------------------------|---------------|----------------|--------|
| D3492-051 Plug Assembly | | Manufactured | No | | | 250 | Each | 20.0000 | 2.0000 | | | |

| <u>Warehouse</u> | <u>Loc Qty</u> | <u>Loc Code</u> |
|------------------|----------------|-----------------|
| <u>Location</u> | | |
| Main Warehouse | | |
| ST | 20 | |
| 44633 ✓ | 20 | |

2 BX 10-01-01

| | | | | | | | | | | | | |
|--------------------------------|--|--------------|----|--|--|-----|------|---------|--------|--|--|--|
| D3492-049 Plug Assembly | | Manufactured | No | | | 250 | Each | 16.0000 | 2.0000 | | | |
|--------------------------------|--|--------------|----|--|--|-----|------|---------|--------|--|--|--|

| <u>Warehouse</u> | <u>Loc Qty</u> | <u>Loc Code</u> |
|------------------|----------------|-----------------|
| <u>Location</u> | | |
| Main Warehouse | | |
| ST | 16 | |
| 40356 | 1 | |
| 44632 ✓ | 15 | |

2 BX 10-01-01

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | |
| | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
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| | | | | | | | | |
| | | | | | | | | |

NOTE: Date & initial all entries

Picklist Print

January 5, 2010 8:03:32 AM

Work Order ID: 54881



Parent Item: D117-762-041



Parent Item Name: Replacement Skidtube

Start Date: 05/01/2010

Required Date: 18/01/2010

Comments: IPP RevD: add pressure wash DD 09.12.11 verified by:EC

Start Qty: 1.00

Required Qty: 1.00

| Component Item ID/ Item Name | Replacement Item ID | Mfg/ Purch | Bin Item | Primary Location | Last Location | Route Seq ID | Unit of Measure | Qty on Hand | Remaining Qty To Pick | Qty Issued | Date Issue | Status |
|---------------------------------|------------------------|---------------|-------------|---------------------|------------------|-----------------|--------------------|----------------|--------------------------|---------------|---------------|--------|
| D3492-053 | | Manufactured | No | | | 250 | Each | 68.0000 | 6.0000 | | | |



Plug Assembly

Warehouse
Location

Loc Qty

Loc Code

Main Warehouse

FP

66

54641 ✓

66

Main Warehouse

ST

2

44063

2

AN960JD10L

Purchased

No

250

Each

4,915.000 2.0000



Washer

Warehouse
Location

Loc Qty

Loc Code

Main Warehouse

ST

4915

101291

16

104885

25

105793

236

109632

174

110985 ✓

4464

6 BR 10-01-21

2 BR 10-01-21

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | |
| | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
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| | | | | | | | | |

NOTE: Date & initial all entries

Picklist Print

January 5, 2010 8:03:32 AM

Work Order ID: 54881



Parent Item: D117-762-041



Parent Item Name: Replacement Skidtube

Start Date: 05/01/2010

Required Date: 18/01/2010

Comments: IPP RevD: add pressure wash DD 09.12.11 verified by:EC

Start Qty: 1.00

Required Qty: 1.00

| Component Item ID/ Item Name | Placement Item ID | Mfg/ Purch | Bin Item | Primary Location | Last Location | Q ID | Unit of Measure | Qty on Hand | Remaining Qty To Pick | Qty Issued | Date Issued | Status |
|---------------------------------|----------------------|---------------|-------------|---------------------|------------------|------|--------------------|----------------|--------------------------|---------------|----------------|--------|
|---------------------------------|----------------------|---------------|-------------|---------------------|------------------|------|--------------------|----------------|--------------------------|---------------|----------------|--------|

| | | | | | | | | | | | | |
|--------|--|-----------|----|--|--|-----|------|-----------|---------|--|--|--|
| AN3C4A | | Purchased | No | | | 250 | Each | 1,195.000 | 28.0000 | | | |
|--------|--|-----------|----|--|--|-----|------|-----------|---------|--|--|--|



BOLT

Warehouse Loc Qty Loc Code

Location

Main Warehouse

ST 1195

112314 13

112720 12

112724 3

112829 1

112991 2

113121 64

113226 586

113359 14

113422 ✓ 500

28 BR 10-01-21.

| | | | | | | | | | | | | |
|--------|--|-----------|----|--|--|-----|------|----------|--------|--|--|--|
| AN3C5A | | Purchased | No | | | 250 | Each | 669.0000 | 2.0000 | | | |
|--------|--|-----------|----|--|--|-----|------|----------|--------|--|--|--|



Bolt

Warehouse Loc Qty Loc Code

Location

Main Warehouse

ST 113644 669

111424 8

111707 69

112314 1

113121 291

113149 300

2 BR 10-01-21.

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | |
| | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
| | | | | | | | | |
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| | | | | | | | | |

NOTE: Date & initial all entries

Picklist Print

January 5, 2010 8:03:32 AM

Work Order ID: 54881



Parent Item: D117-762-041



Parent Item Name: Replacement Skidtube

Start Date: 05/01/2010

Required Date: 18/01/2010

Comments: IPP RevD: add pressure wash DD 09.12.11 verified by:EC

Start Qty: 1.00

Required Qty: 1.00

| Component Item ID/ Item Name | Replacement Item ID | Mfg/ Purch | Bin Item | Primary Location | Last Location | Route Seq | Unit of Measure | Qty on Hand | Remaining Qty To Pick | Qty Issued | Date Issued | Status |
|---------------------------------|------------------------|---------------|-------------|---------------------|------------------|--------------|--------------------|----------------|--------------------------|---------------|----------------|--------|
| AN960JD416L | | Purchased | No | | | 250 | Each | 795.0000 | 2.0000 | | | |
| | | | | | | | | | | | | |
| Washer | | | | | | | | | | | | |

| Warehouse | Loc Qty | Loc Code |
|----------------|---------|----------|
| Location | | |
| Main Warehouse | | |
| ST | 795 | |
| 105078 | 4 | |
| 107008 | 54 | |
| 108583 ✓ | 40 | |
| 110153 | 297 | |
| 112492 | 400 | |

2 BK 10-01-21

| | | | | | | | | | | | | |
|-----------|-----------|----|--|--|--|-----|------|----------|---------|--|--|--|
| AN960C10L | Purchased | No | | | | 250 | Each | 416.0000 | 28.0000 | | | |
| | | | | | | | | | | | | |
| washer | | | | | | | | | | | | |

| Warehouse | Loc Qty | Loc Code |
|----------------|---------|----------|
| Location | | |
| OFFSHORE | | |
| FG | 100 | |
| 103585 | 100 | |
| Main Warehouse | | |
| ST | 316 | |
| 112116 | 156 | |
| 112612 | 160 | |

28. BK 10-01-21

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | |
| | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

NOTE: Date & initial all entries

Picklist Print

January 5, 2010 8:03:32 AM

Work Order ID: 54881

Parent Item: D117-762-041

Parent Item Name: Replacement Skidtube


Start Date: 05/01/2010

Required Date: 18/01/2010

Comments: IPP RevD: add pressure wash DD 09.12.11 verified by:EC


Start Qty: 1.00

Required Qty: 1.00

| Component Item ID/ Item Name | Replacement Item ID | Mfg/ Purch | Bin Item | Primary Location | Last Location | Round Seq | Unit of Measure | Qty on Hand | Remaining Qty To Pick | Qty Issued | Date Issued | Status |
|-----------------------------------------------------------------------------------|------------------------|---------------|-------------|---------------------|------------------|--------------|--------------------|----------------|--------------------------|---------------|----------------|--------|
| AN4-4A | | Purchased | No | | | 250 | Each | 119.0000 | 2.0000 | | | |
|  | | | | | | | | | | | | |
| Bolt | | | | | | | | | | | | |


| <u>Warehouse</u> | <u>Loc Qty</u> | <u>Loc Code</u> |
|------------------|----------------|-----------------|
| <u>Location</u> | | |
| Main Warehouse | | |
| ST | 119 | |
| 101291 | 3 | |
| 106918 | 1 | |
| 108138 ✓ | 58 | |
| 111295 | 57 | |

2 BL 10-01-21.

| | | | | | | | | | | | | |
|-----------------------------------------------------------------------------------|-----------|----|--|--|--|-----|------|---------|--------|--|--|--|
| NAS1611-012 | Purchased | No | | | | 250 | Each | 60.0000 | 6.0000 | | | |
|  | | | | | | | | | | | | |
| O-RING | | | | | | | | | | | | |

| <u>Warehouse</u> | <u>Loc Qty</u> | <u>Loc Code</u> |
|------------------|----------------|-----------------|
| <u>Location</u> | | |
| Main Warehouse | | |
| ST | 60 | |
| 108673 ✓ | 60 | |

6 BL 10-01-21

| | | | | | | | | | | | | |
|-------------------------------------------------------------------------------------|-----------|----|--|--|--|-----|------|---------|--------|--|--|--|
| NAS1611-015 | Purchased | No | | | | 250 | Each | 20.0000 | 2.0000 | | | |
|  | | | | | | | | | | | | |
| O-RING | | | | | | | | | | | | |

| <u>Warehouse</u> | <u>Loc Qty</u> | <u>Loc Code</u> |
|------------------|----------------|-----------------|
| <u>Location</u> | | |
| Main Warehouse | | |
| ST | 20 | |
| 107178 ✓ | 20 | |

2 BL 10-01-21.

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | |
| | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

NOTE: Date & initial all entries

Picklist Print

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January 5, 2010 8:03:32 AM

Work Order ID: 54881



Parent Item: D117-762-041



Parent Item Name: Replacement Skidtube

Start Date: 05/01/2010

Required Date: 18/01/2010

Comments: IPP RevD: add pressure wash DD 09.12.11 verified by:EC

Start Qty: 1.00

Required Qty: 1.00

| Component Item ID/ Item Name | Replacement Item ID | Mfg/ Purch | Bin Item | Primary Location | Last Location | Route Seq ID | Unit of Measure | Qty on Hand | Remaining Qty To Pick | Qty Issued | Date Issued | Status |
|---------------------------------|------------------------|---------------|-------------|---------------------|------------------|-----------------|--------------------|----------------|--------------------------|---------------|----------------|--------|
|---------------------------------|------------------------|---------------|-------------|---------------------|------------------|-----------------|--------------------|----------------|--------------------------|---------------|----------------|--------|

NAS1611-016

Purchased

No

250

Each

117.0000

2.0000



O-RING

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

ST

117

107178 ✓

17

112492

50

113524

50

a BK 10-01-21.

January 5, 2010 8:03:32 AM

Shop Packet Print

Page 12

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | |
| | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
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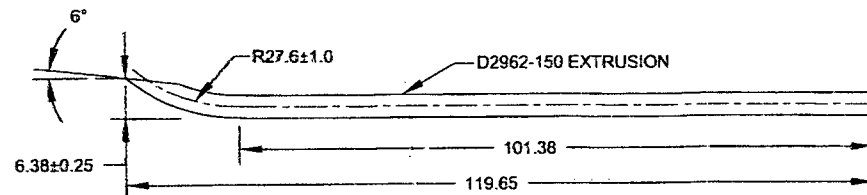
NOTE: Date & initial all entries

PARTS LIST FOR D3582-041 SKIDTUBE ASSEMBLY

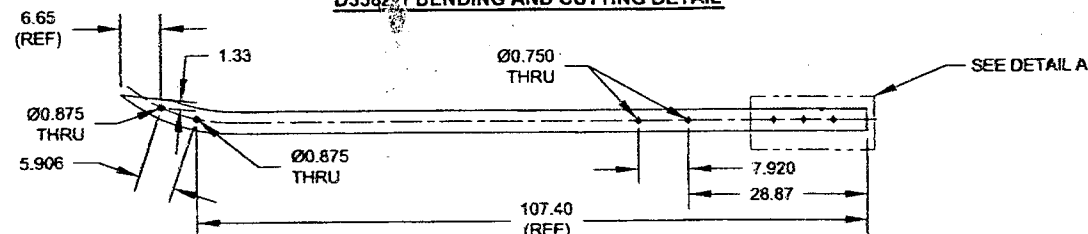
| Qty | Part Number | Description |
|-----|---------------|-------------------|
| X | D3582-041 | SKIDTUBE ASSEMBLY |
| 1 | D2962-150 | EXTRUSION |
| 1 | D2964 | CAP |
| 1 | D2965 | CAP |
| 1 | D2971 | CROSS BOLT SPACER |
| 2 | D2973 | CROSS BOLT SPACER |
| 2 | D3492-049 | PLUG ASSEMBLY |
| 2 | D3492-051 | PLUG ASSEMBLY |
| 6 | D3492-053 | PLUG ASSEMBLY |
| 1 | D3508-3 | WEARPLATE |
| 1 | D3508-9 | WEARPLATE |
| 1 | D3508-11 | WEARPLATE |
| 1 | D3508-13 | WEARPLATE |
| 1 | D3558-3 | GASKET |
| 1 | D3558-9 | GASKET |
| 1 | D3558-11 | GASKET |
| 1 | D3558-13 | GASKET |
| 1 | D3584-1 | WEB |
| 3 | D3662-1 | CROSS BOLT SPACER |
| 1 | D3662-3 | CROSS BOLT SPACER |
| 36 | AELS-1032-130 | INSERT |
| 2 | ALS7-428-165 | INSERT |
| 28 | AN3C4A | BOLT |
| 2 | AN3-5A | BOLT |
| 2 | AN4-4A | BOLT |
| 28 | AN960C10L | WASHER |
| 2 | AN960JD10L | WASHER |
| 2 | AN960JD416L | WASHER |

GENERAL NOTES:

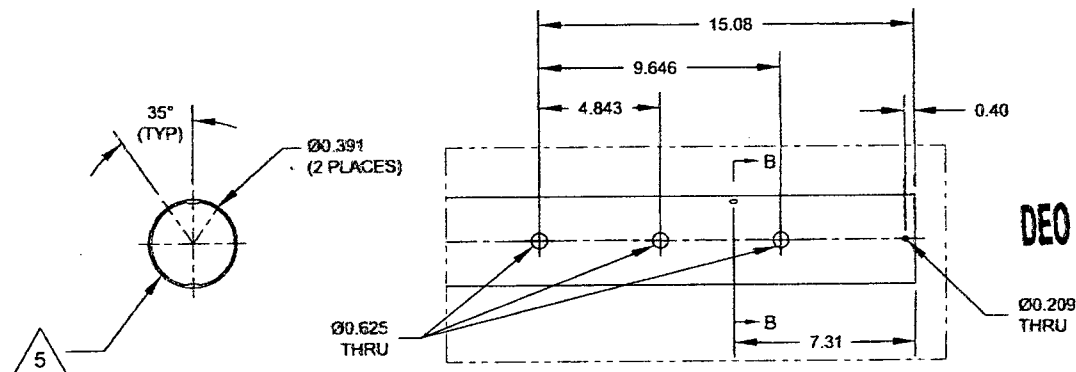
- ALL DIMENSIONS ARE IN INCHES
- TOLERANCES ARE PER DART QSI 016 UNLESS OTHERWISE NOTED
- WELDING TO BE DONE PER DART QSI 004
- INSERT D3584-1 WEB TO LOCATION SHOWN OFF AFT END OF SKIDTUBE AND BOND WEB INTO OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241/291 ADHESIVE PER DART QSI 015 AFTER BENDING.
- USE DART DRILL TEMPLATE DT6900 TO LOCATE AND DRILL $\varnothing 0.297$ HOLES (36 PLACES) FOR WEARSHOE INSERTS. INSTALL AELS-1032-130 PER SECTION G-G (36 PLACES) AFTER FINISH. SEAL WEARPLATE BOLTS WITH SIKAFLEX-241/291.
- DO NOT INSTALL AN3C4A BOLTS AND AN960C10L WASHERS IN INDICATED LOCATIONS.
- FINISH:
 - CHEMICAL CONVERSION COAT PER DART QSI 005 4.1 PRIOR TO INSERTING D3584-1 WEB.
 - POWDER COAT ASSEMBLY GLOSS WHITE (REF 4.3.5.1) PER DART QSI 005 4.3.
 - ANTI-SKID PAINT AS INDICATED TO 1.00 ABOVE CENTER LINE PER DART QSI 005 4.4.



D3582-1 BENDING AND CUTTING DETAIL



D3582-1 DRILLING DETAIL



SECTION B-B
SCALE 1:5

DETAIL A
SCALE 1:5

DEO ATTACHED

RELEASED
07-11-2010

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 541881

| | | | | | |
|------------|-------------|--------------------------|--|--------------|----------|
| A | | NEW ISSUE | | PH | 07.06.08 |
| REV. | DESCRIPTION | | | BY | DATE |
| DESIGN | 24 | DART AEROSPACE USA, INC | | | |
| DRAWN | PH | PORT HADLOCK, WA | | | |
| CHECKED | | DRAWING NO. | | REV. A | |
| MFG. APPR. | 10 | D3582 | | SHEET 1 OF 2 | |
| APPROVED | | TITLE | | SCALE | |
| DE APPR. | 24 | BK 117 SKIDTUBE ASSEMBLY | | 1:2 | |
| DATE | 07.06.08 | | | | |

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BA 10-1-5

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | |
| | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
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NOTE: Date & initial all entries

D2964 CAP
(GRIND FLUSH)

DETAIL C
SCALE 1:10

SECTION D-D
SCALE 3:10

SECTION E-E
SCALE 3:10

SECTION F-F
SCALE 3:10

NO BOLTS AT
THESE LOCATIONS

D3582-041 ASSEMBLY DETAIL

NO BOLTS AT
THESE LOCATIONS

D3582-041 BLACK ANTI-SKID DETAIL

DEO ATTACHED

RELEASED

SECTION D-D NOTES

AFTER BENDING AND DRILLING ASSEMBLY
PERFORM THE FOLLOWING:

1. CHAMFER HOLE 0.030 x 45°
2. INSERT D2971 SPACER
3. WELD INTO PLACE AND GRIND FLUSH
4. PASS Ø0.750 DRILL TO REMOVE SPILL OVER
5. AFTER FINISH, INSTALL D3492-049 PLUG ASSEMBLY (2 PLACES)

SECTION E-E NOTES

AFTER BENDING AND DRILLING ASSEMBLY
PERFORM THE FOLLOWING:

1. CHAMFER HOLE 0.030 x 45°
2. INSERT D3662-3 SPACER
3. WELD INTO PLACE AND GRIND FLUSH
4. PASS Ø0.672 DRILL TO REMOVE SPILL OVER
5. AFTER FINISH, INSTALL D3492-051 PLUG ASSEMBLY (2 PLACES)

AFTER FINISH, INSTALL
ALS7-428-165 INSERT (1)
AN4-4A BOLT (1)
AN960JD416L WASHER (1)
(2 PLACES)

SECTION G-G
SCALE 3:10

SECTION G-G NOTES

AFTER BENDING AND DRILLING ASSEMBLY
PERFORM THE FOLLOWING:

1. CHAMFER HOLE 0.030 x 45°
2. INSERT D3662-1 SPACER (3 PLACES)
3. WELD INTO PLACE AND GRIND FLUSH
4. PASS Ø0.515 DRILL TO REMOVE SPILL OVER
5. AFTER FINISH, INSTALL D3492-053 PLUG ASSEMBLY (6 PLACES)

SECTION F-F NOTES

AFTER BENDING AND DRILLING ASSEMBLY
PERFORM THE FOLLOWING:

1. CHAMFER HOLE 0.030 x 45°
2. INSERT D2973 SPACER (2 PLACES)
3. WELD INTO PLACE AND GRIND FLUSH
4. PASS Ø0.625 DRILL TO REMOVE SPILL OVER

| | | |
|------------|----------|---------------------------------------------|
| DESIGN | PH | DART AEROSPACE USA, INC |
| DRAWN | PH | PORT HADLOCK, WA |
| CHECKED | PH | DRAWING NO. REV. A |
| MFG. APPR. | PH | D3582 SHEET 2 OF 2 |
| APPROVED | PH | TITLE SCALE |
| DE APPR. | PH | BK 117 SKIDTUBE ASSEMBLY 1:20 |
| DATE | 07.06.08 | COPYRIGHT © 2007 BY DART AEROSPACE USA, INC |

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

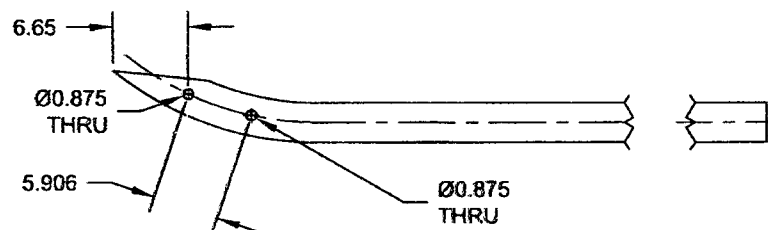
| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
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NOTE: Date & initial all entries

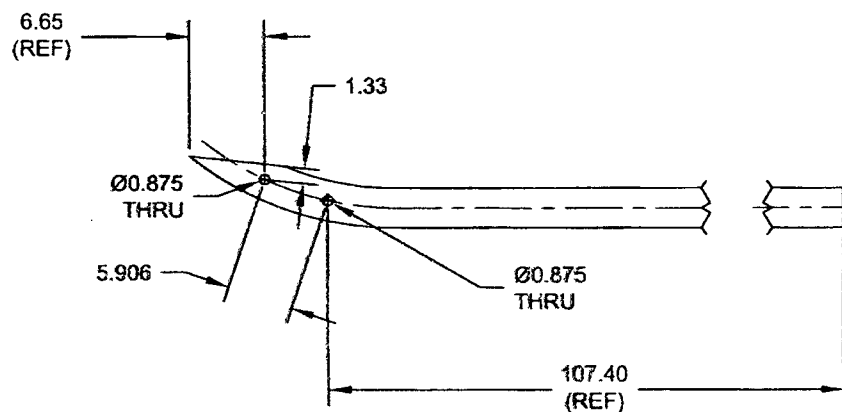
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|----------------------|-----------------------------------|------------------|----------------------------------------------|--|-------------------------|---------------------------|--------------|
| DRAWING NO. D3582 | TITLE BK 117 SKIDTUBE ASSEMBLY | REV. A | DART AEROSPACE USA, INC ENGINEERING ORDER | | D.E.O. NO. D3582-A-1 | SHEET NO. SHEET 1 OF 1 | SCALE NTS |
| DRAWN PH | CHECKED B | MFG. APPR. R | APPROVED MD | | DE APPR. MH | | |
| DATE 09.04.06 | DATE 04.04.06 | DATE 09.04.06 | DATE 09/24/06 | | DATE 09.04.06 | | |

FOR EASE OF MANUFACTURE AND TO ENSURE THE FIT OF BRISTOL WIRESTRIKE SKID GEAR DEFLECTOR:
UPDATE DIMENSIONING OF 2 FWD HOLES ON SHEET 1 AS SHOWN

IS:



WAS:



RELEASED
09/04/22

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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| | | | | | | | | |

NOTE: Date & initial all entries

NO. 220

AWS D17.1.2001
QUALIFICATION TEST RECORD

Name: Barclay Elliott
Job number: 54161
Part number: D17-762-041
Description: 17 sk.d tube
Welding Process: Tig[☒] Mig[]
Base material: Aluminium
Current: AC[] DC[]

TEST REQUIREMENTS AND RESULTS

Visual: pass[☒] fail[]
Penetration: pass[☒] fail[]

UNACCEPTABLE

Cracks: pass[☒] fail[]
Undercut: pass[☒] fail[]
Pin holes: pass[☒] fail[]
Overlap (cold lap): pass[☒] fail[]
Porosity (surface): pass[☒] fail[]
Coloration: pass[☒] fail[]

Qualifier P.D.J. Date of Test Coupon 09.12.10

Welder Barclay Elliott Date of Test Coupon 09/12/10

The above named individual is qualified in accordance with AWS D17.1.2001 to weld